Abstract

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With a method for the contactless determination of a thickness of a layer (20) made of electrically-conductive material of a component (17), a sensor composed of a coil form (13) and a coil (14) is positioned in the vicinity of the component (17) to be measured. The method is based on a combination of the principles of induction and eddy current. The thickness of the layer (20) is determined using a plurality of measuring and evaluation steps in which the coil (14) is acted upon with a first alternating current frequency f and its inductance and resistance values are evaluated. The distance between the coil form (13) and, therefore, the coil (14), and the component (17) is derived from the resistance value R of the coil (14) acted upon with alternating current frequency f.